REMARKS

With this amendment, Claims 1-2, 5-7, 9-10, and 14-17 are pending in the present application. Claims 1, 5-6, and 9 have been amended. Claims 3-4, 8, and 11-13 have been canceled without prejudice. Claims 14-16 have been added. In view of the foregoing amendments and the following remarks, Applicant respectfully requests reconsideration and allowance of this application.

Claim Rejections-35 U.S.C. § 112

The Examiner rejected Claims 1-13 under 35 U.S.C. § 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention. The Examiner asserts that the term "predominant particle size" is indefinite throughout the claims and advised Applicant to remove the word "predominant" from these claims. Applicant respectfully disagrees with the Examiner. According to the *Merriam-Webster Dictionary*, the word "predominant" is clearly defined as "being the most frequent and common." Applicant further submits that the term "predominant particle size" is readily understood by a person skilled in the art to mean greater than 50%.

The Examiner also indicates that Claim 1 is indefinite because there is no difference between fly ash and aluminous material. The Examiner suggests that Applicant consider incorporating features recited in Claim 3 into Claim 1 to distinguish aluminous material from fly ash. Pursuant to the Examiner's suggestion, Applicant has amended Claim 1 by incorporating elements recited in Claim 3 into Claim 1 so as to further distinguish aluminous material from fly ash.

The Examiner notes that the term "a water reduction effect" in Claim 1 is somewhat vague and recommended replacing this term with --water reduction--. Applicant has amended Claim 1 in accordance with the Examiner's recommendation. The Examiner also indicates that the terms "such as" and "and the like" in Claim 6, and "conventional" plasticiser in Claim 9 are indefinite. To address the Examiner's concerns, Applicant has deleted these terms throughout the claims.

With respect to the terms "fast setting" and "extra-fast setting" in Claim 6, the Examiner asserts that these terms would also appear indefinite because it is difficult to distinguish one from the other. Applicant respectfully disagrees with the Examiner and submits that these are terms of

art generally used and well understood by those skilled in the relevant technical field. Specifically, cements are often grouped into categories based on their relative set time. Portland cement, for example, achieves stiffness and sets in about 2 hours in normal conditions but could take up to about 8 hours to set in certain applications such as in colder environments. Under these circumstances, an accelerator is often added to the Portland cement to reduce the set time back to about 1-2 hours and such cement is usually referred to as "fast setting cement".

However, there are other kinds of cement that have set times magnitudes faster than that of Portland cement and other "fast setting cements". They are typically used in applications in which the cement is required to set in a matter of minutes, such as for shotcrete and repair mortar. These cements are typically referred to by those skilled in the art as "extra fast setting" cements. The "extra fast setting" cements are generally understood to be chemically different from "fast setting cements" and to have higher aluminous contents or much more potent accelerators. Accordingly, Applicant respectfully submits that the terms "fast setting cement" and "extra fast setting cement" are clearly distinguishable by those skilled in the art and requests that this rejection be withdrawn.

With respect to the term "modified cements" in Claim 6, the Examiner indicates that this term would appear vague because it does not indicate what cements are modified and how. Applicant respectfully submits that the term "modified cement" is also a term of art generally used by those skilled in the art. It is typically understood to refer to cements that incorporate additional additives such as polymers and the like to change the cement properties. As such, Applicant respectfully requests that this rejection be withdrawn.

Claim Rejections - 35 U.S.C. §102 (a, b, and e) and 35 U.S.C. §103(a)

The Examiner rejected Claims 1-13 under 35 U.S.C. §102(a, b, and e) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over U.S. Pat. No. 6,346,146 to Duselis et al., U.S. Pat. No. 4,915,740 to Sakai et al., U.S. Pat. Nos. 5,484,480, 5,693,137, and 5,997,632 to Styron, U.S. Pat No. 6,332,921 to Brothers et al., U.S. Pat. No. 5,853,475 to Liskowitz et al., U.S. Pat. Nos. 5,556,458, 5,536,310 to Brook et al., U.S. Pat. No. 5,439,518 to Francis et al., U.S. Pat. No. 5,387,283 and 5,490,889 to Kirkpatrick et al., U.S. Pat. Nos. 5,383,531 to Onan et al., U.S. Pat. No. 5,294,255 to Smetana et al., U.S. Pat. No. 5,073,197 to Majumdar et al., U.S. Pat. No. 5,032,548 to Lowe, U.S. Pat. No. 4,268,316 to Willis Jr., U.S. Pat. No. 4,268,316 to

Dunston Jr., U.S. Pat. Nos. 4,250,134 or 2,987,408 to Minnick. For the reasons discussed below, Applicant respectfully traverses these rejections.

After carefully reviewing each of the cited references, Applicant submits that none of the references, either individually or in combination, is directed towards using a pre-selected amount of fly ash and/or aluminous material of a specific particle size range in a cementitious slurry to achieve a water reduction without substantially increasing the viscosity as disclosed in one embodiment of Applicant's invention. Furthermore, none of these references teach or suggest a cementitious slurry having a total amount of fly ash that is greater than the amount of the cement. (*See, e.g.,* independent Claim 1 as amended)

In one embodiment, Applicant's invention is directed towards a novel cementitious slurry formulation that uses a pre-selected amount of fly ash and/or an aluminous material of a particular particle size range to achieve a surprising synergistic effect in terms of water reduction. This synergistic effect is described in detail in the specification. (*See, e.g.,* Paragraphs [0042] to [0044]) While the cited references teach compositions comprising a cement and fly ash, none of the references teach or suggest the addition of a pre-selected amount of fly ash of a particular particle size range to reduce the water required in the slurry by about 20% to 40%. Moreover, none of the references disclose the fly ash as having a weight percentage greater than that of the cement in a cement slurry, let alone teach or suggest that this combination of ingredients would achieve a synergistic water reducing effect while maintaining the slurry viscosity at substantially the same level. In fact, it is against conventional wisdom to form a cementitious slurry in which the amount of fly ash is greater than that of the hydraulic binder by weight because of the common belief that the viscosity of the slurry would be so high that it would be difficult to achieve fluidity of the kneaded product. Accordingly, Applicant respectfully requests that the rejection of the claims over these references be withdrawn.

CONCLUSION

In view of the foregoing, Applicant respectfully submits that all pending claims of the present application are in condition for allowance, and such action is earnestly solicited. Should there be any impediment to the prompt allowance of this application that could be resolved through a telephone conference, the Examiner is respectfully requested to call the undersigned at

the number shown below. Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: 3/27/2003

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